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**Complete if Known**

Application Number	09/715,965
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<b>Filing Date</b>	<b>November 17, 2000</b>
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First Named Inventor	Denholm
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<b>Group Art Unit</b>	<b>1651</b>
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Examiner Name	Meller, M.
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Attorney Docket Number	IT 106 (CPA)
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Sheet	1	of	5
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## U.S. PATENT DOCUMENTS

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2

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## OTHER ART -- NON PATENT LITERATURE DOCUMENTS

Examiner's Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
MM		CRUM, et al., "A new class of steroids inhibits angiogenesis in the presence of heparin or a heparin fragment," <i>Science</i> 230(4732): 1375-1378 (1985).	
		CULP, et al., "Two functionally distinct pools of glycosaminoglycan in the substrate adhesion site of murine cells," <i>J. Cell Biol.</i> 79(3):788-801 (1978).	
		DENHOLM, et al., "The effects of bleomycin on alveolar macrophage growth factor secretion," <i>Am J Pathol.</i> 134(2):355-63 (1989).	
		DENHOLM, et al., "Chondroitinase AC inhibits tumor cell invasion, proliferation, and angiogenesis," <i>FASEB J</i> 14(4): A702 (2000).	
		DENHOLM, et al., "Anti-tumor activities of chondroitinase AC and chondroitinase B: inhibition of angiogenesis, proliferation and invasion," <i>Eur J Pharmacol</i> 416(3): 213-221 (2000).	
		FAASSEN, et. al., "A cell surface chondroitin sulfate proteoglycan, immunologically related to CD44, is involved in type I collagen-mediated melanoma cell motility and invasion," <i>J. Cell Biol.</i> 116(2):521-531 (1992).	
		FAASSEN, et. al., "Cell surface CD44-related chondroitin sulfate proteoglycan is required for transforming growth factor-beta-stimulated mouse melanoma cell motility and invasive behavior on type I collagen," <i>J. Cell Science</i> 105(Pt 2):501-511 (1993).	
		FOLKMAN, "Angiogenesis in cancer, vascular, rheumatoid and other disease," <i>Nat Med</i> 1(1):27-31 (1995).	
		FOLKMAN, "Successful treatment of an angiogenic disease," <i>N. Engl. J. Med.</i> 320(18): 1211-1212 (1989).	
		FOLKMAN, "Tumor angiogenesis: therapeutic implications," <i>N. Engl. J. Med.</i> 285(21): 1182-1186 (1971).	

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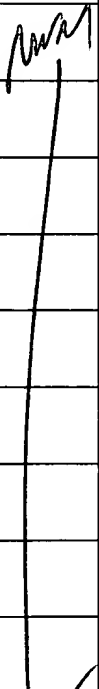
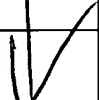
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		FOLKMAN, et al., "Angiogenesis inhibition and tumor regression caused by heparin or a heparin fragment in the presence of cortisone," <i>Science</i> 221(4612): 719-725 (1983).	
		FOLKMAN, et al., "Control of angiogenesis with synthetic heparin substitutes," <i>Science</i> 243(4897): 1490-1493 (1989).	
		FORRESTER, et al., "A paradigm for restenosis based on cell biology: clues for the development of new preventive therapies," <i>J. Am. Coll. Cardiol.</i> 17(3):758-769 (1991).	
		GU, et al., "Purification, characterization and specificity of chondroitin lyases and glycuronidase from <i>Flavobacterium heparinum</i> ," <i>Biochem. J.</i> 312(Pt 2):569-577 (1995).	
		HENKE, et. al., "CD44-related chondroitin sulfate proteoglycan, a cell surface receptor implicated with tumor cell invasion, mediates endothelial cell migration on fibrinogen and invasion into a fibrin matrix," <i>J. Clin. Invest.</i> 97(11):2541-2552 (1996).	
		INGBER, et al., "Inhibition of angiogenesis through modulation of collagen metabolism," <i>J. Lab. Invest.</i> 59: 44-51 (1989).	
		INGBER, et al., "A possible mechanism for inhibition of angiogenesis by angiostatic steroids: induction of capillary basement membrane dissolution," <i>Endocrinol.</i> 119(4): 1768-1775 (1986).	
		INGBER, et al., "Mechanochemical switching between growth and differentiation during fibroblast growth factor-stimulated angiogenesis in vitro: role of extracellular matrix," <i>J. Cell. Biol.</i> 109(1): 317-330 (1989).	
		JACKSON et. al., "Glycosaminoglycans: molecular properties, protein interactions, and role in physiological processes," <i>Physiol. Rev.</i> 71(2):481-530 (1991).	
		JIN-INCHI, et al., "Inhibition of experimental metastasis of murine Lewis lung carcinoma by an inhibitor of glucosylceramide synthase and its possible mechanism of action," <i>Cancer Res.</i> 50:6731-6737 (1990).	

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MM		LIDA, et al., "Cell surface chondroitin sulfate proteoglycans in tumor cell adhesion, motility and invasion," <i>Sem. Cancer Biol.</i> 7:155-162, (1996).	
		LINHARDT, et al., "Polysaccharide lyases," <i>Appl. Biochem. Biotech.</i> 12(2): 135-176 (1986).	
		LINN et. al., "Isolation and characterization of two chondroitin lyases from <i>Bacteroides thetaiotaomicron</i> ," <i>J. Bacteriol.</i> 156(2):859-866 (1983).	
		MEYER, et al., "Mechanisms of tumour metastasis," <i>Eur. J. Cancer</i> 34(2):214-221 (1998).	
		MICHELACCI, et al., "Isolation and characterization of an induced chondroitinase ABC from <i>Flavobacterium heparinum</i> ," <i>Biochim. Biophys. Acta.</i> 923(2):291-301 (1987).	
		MURRAY, et al., "Purification and partial amino acid sequence of a bovine cartilage-derived collagenase inhibitor," <i>J. Biol. Chem.</i> 261(9): 4154-4159 (1986).	
		NAKAJIMA, et al., "Heparan sulfate degradation: relation to tumor invasive and metastatic properties of mouse B16 melanoma sublines," <i>Science</i> 220(4597):611-613 (1983).	
		RICHARDSON, et al., "Transient morphological and biochemical alterations of arterial proteoglycan during early wound healing," <i>Exp. Mol. Pathol.</i> 58(2):77-95 (1993).	
		SATO, et al., "Submit structure of Chondroitinase ABC from <i>Proteus vulgaris</i> ," <i>Agric. Biol. Chem.</i> 50:1057-1059 (1986).	
V		TABAS, et al., "Lipoprotein lipase and sphingomyelinase synergistically enhance the association of atherogenic lipoproteins with smooth muscle cells and extracellular matrix. A possible mechanism for low density lipoprotein and lipoprotein(a) retention and macrophage foam cell formation," <i>J. Biol. Chem.</i> 268(27):20419-20432 (1993).	

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<i>[Signature]</i>		TAKEUCHI, "Effect of chondroitinases on the growth of solid Ehrlich ascites tumour," <i>Brit J Cancer</i> 26(2): 115-119 (1972).	
<i>[Signature]</i>		TROCHAN, et al., "Evidence of involvement of CD44 in endothelial cell proliferation, migration and angiogenesis in vitro," <i>Int. J. Cancer</i> 66:664-668 (1996).	
<i>[Signature]</i>		VOLPI, "Fast moving and slow moving heparins, dermatan sulfate, and chondroitin sulfate: qualitative and quantitative analysis by agarose-gel electrophoresis," <i>Carbohydrate Res.</i> 247:263-278 (1993).	
<i>[Signature]</i>		YEO, et al., "Alterations in proteoglycan synthesis common to healing wounds and tumors," <i>Am. J. Pathol.</i> 138(6):1437-1450 (1991).	
<i>[Signature]</i>		ZAWADZKI, et al., "Blockade of metastasis formation by CD44-receptor globulin," <i>Int. J. Cancer</i> 75(6):919-924 (1998).	

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